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TRANSPORTATION CABINET

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Michael W. Hancock, P.E.
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DESIGN MEMORANDUM NO. 04A-13

TO: Chief District Engineers
Design Engineers
Design Consultants

FROM: William S. Gulick, P.E. P.L.S. Acting Director
Division of Highway Design

DATE: January 10, 2014

SUBJECT: Reissuance of Design Guidance for Shared Four-Lane (2+1) Highways

The intent of this Memo is to offer new guidance on 2+1 roadways and as such Design Memo No. 04-13 is hereby rescinded and is replaced in its entirety by this Design Memo.

The Kentucky Transportation Cabinet continues to support the use of innovative facility designs capable of providing improved mobility and safety for Kentucky motorists. Guidance should be sought from the AASHTO Green Book "A Policy on Geometric Design of Highways and Streets" 2011 edition section 3.4.4. for three lane highways (also known as 2+1) as alternatives are developed. A (2+1), three lane highway may maintain a continuous three-lane cross section, utilizing a passing lane in alternating directions along a rural highway connecting major activity centers or towns. Where applicable, this design may be used on a new alignment or retrofitted on an existing alignment.

This concept may be useful for addressing operational deficiencies on rural, two-lane highways that do not have the volume to necessitate a four-lane facility. Three-lane highways have been shown to improve operational efficiency (travel speeds and percent time spent following) and reduce crashes over two-lane highways. They also present a significantly lower cost option to a four-lane divided highway.

While no special review or approval is required for the use of a three lane facility design, the Project Manager should proceed carefully, ensuring, that the Divisions of Highway Design and Traffic Operations have an opportunity to comment. It is also critical to have a robust public involvement plan to engage, educate, and gain support from key stakeholders and the general public. Any questions regarding the use of 2+1 three-lane highways should be directed to this office.

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